

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 2, 4 and 11, cancel claims 17-21, and add new claims 22-40. No new matter is believed to be introduced as a result of the aforementioned claim amendments and new claims. The following list of claims replaces all previous claim listings in this case.

1. **(Currently Amended)** A transceiver module, ~~useful in screening for electrostatic discharge damage to an laser diode included in the transceiver module comprising:~~

a laser diode;
at least one selectable switch coupled to the laser diode and configured to selectively isolate the laser diode from other circuitry disposed in the transceiver module; and
a plurality of external test pins coupled to the [[oxide]] laser diode wherein the test pins are adapted to be connected to external testing equipment.
2. **(Currently amended)** The transceiver module of claim 1, further comprising a laser driver ~~arranged so that the at least one selectable switch is able to selectively couple the laser driver coupled to the laser diode, wherein the laser driver comprises the at least one selectable switch.~~
3. **(Original)** The transceiver module of claim 1, wherein the external test pins are pogo style pins.
4. **(Currently Amended)** A transceiver module comprising:

a laser diode;
a laser driver coupled to the laser diode;
a microprocessor coupled to the laser driver[[,]];
memory coupled to the microprocessor, the memory comprising a reference operating characteristic of the laser diode; and
wherein the microprocessor is adapted to collect periodic operating characteristics of the laser diode and to compare the periodic operating characteristics of the laser diode to the reference operating characteristics of the laser diode.

5. **(Original)** The transceiver module of claim 4, wherein the memory comprises an electronically erasable programmable read only memory.

6. **(Original)** The transceiver module of claim 4, wherein the reference operating characteristics of the laser diode are stored as quadratic spline coefficients.

7. **(Original)** The transceiver module of claim 4, wherein the reference and periodic operating characteristics of the laser diode comprise current/voltage characteristics.

8. **(Original)** The transceiver module of claim 4, wherein the reference and periodic operating characteristics of the laser diode comprise current versus optical power characteristics.

9. **(Original)** The transceiver module of claim 4, wherein the microprocessor is further adapted to store the periodic operating characteristics of the laser diode in the memory.

10. **(Original)** The transceiver module of claim 4, wherein the microprocessor is further adapted to store the periodic operating characteristics of the laser diode in the memory as cubic spline coefficients.

11. **(Currently Amended)** A transceiver module comprising:

a laser diode;

a laser driver coupled to the laser diode;

a microprocessor coupled to the laser driver[[],];

memory coupled to the microprocessor; and

wherein the microprocessor is adapted to:

collect periodic operating characteristics of the laser diode at various times;

store the collected periodic operating characteristics of the laser diode in the memory; and

compare the periodic operating characteristics of the laser diode collected at least two different times to detect damage to the laser diode.

12. **(Original)** The transceiver of claim 11, wherein the periodic operating characteristics comprise current/voltage characteristics.

13. **(Original)** The transceiver of claim 11, wherein the periodic operating characteristics comprise current versus optical power characteristics.

14. **(Original)** The transceiver of claim 11, wherein the microprocessor is further configured to set a fault flag when damage to the diode is discovered.

15. **(Original)** The transceiver of claim 11, further comprising a communications connector adapted to couple to an electronic component, the microprocessor further configured to notify an electronic component connected to the communication connector when damage to the diode is discovered.

16. **(Original)** The transceiver of claim 11, wherein the microprocessor is further configured to record the periodic operating characteristics as cubic splines to the memory.

17. – 21. **(Canceled)**

22. **(New)** The transceiver module as recited in claim 4, further comprising:

a pair of switches arranged to selectively couple both the laser driver and the microprocessor to the laser diode; and

first and second external test pins coupled to respective first and second sides of the laser diode, the first and second external test pins arranged so as to be in communication with the laser diode regardless of whether the switches are open or closed.

23. **(New)** The transceiver module as recited in claim 22, wherein when both switches are open, both the laser driver and the microprocessor are uncoupled from the laser diode.

24. **(New)** The transceiver module as recited in claim 4, wherein the laser diode and laser driver are arranged such that the laser driver can bias the laser diode through two alternate paths.

25. (New) The transceiver module as recited in claim 24, wherein one of the paths includes a pair of switches arranged to enable selective coupling of the laser driver to the laser diode.

26. (New) The transceiver module as recited in claim 4, wherein the laser diode comprises an oxide laser.

27. (New) The transceiver module as recited in claim 4, wherein the laser diode comprises a vertical cavity surface emitting laser (VCSEL).

28. (New) A method for screening optical transceiver modules for electrostatic discharge damage, the method being performed in connection with an optical transceiver module that includes a laser diode, and the method comprising:

- defining reference operating characteristics of the laser diode;
- storing the reference operating characteristics of the laser diode;
- periodically collecting operating characteristics of the laser diode;
- comparing the collected operating characteristics of the laser diode with the reference operating characteristics of the laser diode; and
- if damage to the laser diode is discovered, setting a fault flag.

29. (New) The method as recited in claim 28, wherein the reference operating characteristics are stored as quadratic spline coefficients.

30. (New) The method as recited in claim 28, wherein the periodically collected operating characteristics of the laser diode are stored as cubic spline coefficients.

31. (New) The method as recited in claim 28, wherein the periodically collected operating characteristics of the laser diode comprise current/voltage characteristics.

32. (New) The method as recited in claim 28, wherein the periodically collected operating characteristics of the laser diode comprise current versus optical power characteristics.

33. (New) The method as recited in claim 28, wherein the periodically collected operating characteristics of the laser diode are collected when a forward bias voltage is applied to the laser diode.

34. (New) The method as recited in claim 33, wherein the periodically collected operating characteristics of the laser diode comprise at least one of: cut-in voltage; and, forward threshold voltage.

35. (New) The method as recited in claim 28, wherein the periodically collected operating characteristics of the laser diode are collected when a reverse bias voltage is applied to the laser diode.

36. (New) The method as recited in claim 35, wherein the periodically collected operating characteristics of the laser diode comprise at least one of: breakdown voltage; reverse bias knee; and, reverse threshold voltage.

37. (New) The method as recited in claim 28, wherein periodically collecting operating characteristics of the laser diode comprises:

varying a voltage across the laser diode; and
measuring a current through the laser diode.

38. (New) The method as recited in claim 28, wherein at least a portion of the method is performed in response to the occurrence of a predefined event.

39. (New) The method as recited in claim 28, further comprising performing a polling routine in response to a setting of the fault flag.

40. (New) The method as recited in claim 28, wherein after a calibration of a laser driver associated with the laser diode is performed, current/voltage characteristics of the laser diode are measured by sweeping each section of an I-V curve while controlling the DC bias on the laser diode.